DOCUMENT RESUME

ED 470 666 TM 034 563

AUTHOR	Capa, Yesim; Loadman, William E.
TITLE	Self-Efficacy and Previous Testing Experiences as Predictors of Test Anxiety among College Students.
PUB DATE	2001-01-00
NOTE	17p.; Paper presented at the Annual Meeting of the Mid-Western Educational Research Association (Columbus, Ohio, October 16-19, 2002).
PUB TYPE	Reports - Research (143) -- Speeches/Meeting Papers (150)
EDRS PRICE	EDRS Price MF01 Plus Postage. PC Not Available from EDRS
DESCRIPTORS	*College Students; Educational Experience; Higher Education; Predictor Variables; Regression (Statistics); *Self Efficacy; *Test Anxiety

ABSTRACT

This study examined how college students' test anxiety related to previous testing experiences and self-efficacy. Participants were 29 undergraduate college students enrolled at a Midwestern university. Instruments used to measure the criterion and predictor variables were: Test Anxiety Scale, College Academic Self-efficacy Scale, Generalized Self-Efficacy Scale, and Previous Testing Experience Scale. Two separate simultaneous multiple regression analyses were performed to answer the research questions. Results indicate that the regression equation of test anxiety using previous testing experiences and academic self-efficacy as predictors was significant, and 40% of the variability in test anxiety was predictable on the basis of these two predictor variables. On the other hand, using general efficacy instead of academic efficacy explained less variability, and the general efficacy variable was found to be not significant. Correlational analysis demonstrated that test anxiety is positively associated with previous testing experience and negatively related with academic self-efficacy. The findings supported the previous research conducted in this field. (Contains 3 tables and 18 references.) (Author/SLD)

Reproductions supplied by EDRS are the best that can be made
from the original document.

ED 470 666

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)
☑ This document has been reproduced as received from the person or organization originating it.
☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL IN MICROFICHE, AND IN ELECTRONIC MEDIA FOR ERIC COLLECTION SUBSCRIBERS ONLY, HAS BEEN GRANTED BY

Y. Capa

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

2A

Self-Efficacy and Previous Testing Experiences as Predictors of Test Anxiety among College Students

Yesim CAPA

William E. LOADMAN

The Ohio State University

TM034563

Paper presented at the annual meeting of the Mid-Western Educational Research Association, Columbus, OH. Session T.1340.PP, *Investigating Factors that Involve Student Achievement,* October 17, 2002.

BEST COPY AVAILABLE

Abstract

This paper examines how college students' test anxiety relates with previous testing experiences and self-efficacy. Participants were 29 undergraduate college students enrolled in a mid-western university. Instruments used to measure the criterion and predictor variables were: Test Anxiety Scale, College Academic Self-Efficacy Scale, Generalized Self-Efficacy Scale, and Previous Testing Experience Scale. Two separate simultaneous multiple regression analyses were performed to answer the research questions. Results indicated that the regression equation of test anxiety using previous testing experiences and academic self-efficacy as predictors was significant and 40% of the variability in test anxiety was predictable on the basis of these two predictor variables. On the other hand, using general efficacy instead of academic efficacy explained less variability and the general efficacy variable was found to be not significant. Correlational analysis demonstrated that test anxiety is positively associated with previous testing experience and negatively related with academic self-efficacy. The findings supported the previous research conducted in this field.

Self-Efficacy and Previous Testing Experiences as Predictors of Test Anxiety among College Students

Introduction

Testing is widely used in education and by public or private sectors for a variety of purposes including making decisions about people. Sarason (1959) stated well the influence of testing in our life by saying: "We live in a test-conscious, test-giving culture in which the lives of people are in part determined by their test performance" (p.26). It is almost inevitable to grow up in today's society without having some type of test, whether an achievement test in a classroom, a standardized test, a scholastic aptitude for college admission, or an occupational placement test. When you think about the many uses of tests and the influence of tests on people's lives, it is not surprising that the testing situation may evoke anxiety reactions in many individuals, sometimes even so disturbing that they need professional assistance (Spielberger & Vagg, 1995). As a result, researchers in the field of education, counseling, and psychology have become interested in understanding the nature, correlates, and results of the test anxiety.

The earliest investigations of test anxiety (1900-1950) basically dealt with physiological reactions experienced by examinees during stressful examinations. Test anxiety was considered as a physiological arousal resulting from the activation of the autonomic nervous system (Spielberger & Vagg, 1995). This definition neglected the experiential qualities of emotional states and individual differences in anxiety occurrence. Then, in the early 1950s, Mandler and Sarason began to conduct empirical studies in this field and developed the first operational self-report measures of test anxiety for both adult (Test Anxiety Questionnaire) and child (Test Anxiety Scale for Children) populations.

Liebert and Morris (1967) contributed to the test anxiety research field by conceptualizing test anxiety as having two components, worry and emotionality. They described the worry component as "primarily cognitive concern about consequences of failure" (p.975) and the emotionality component as consisting of autonomic reactions that are aroused by evaluative stress. They suggested that the worry component was associated with performance decreases on cognitive tasks and the emotionality component was unrelated with task performance, except for students who had low worry scores.

Another major contribution to the field, advanced by Spielberger, was relating state versus trait personality traits distinction to the domain of test anxiety. The concepts of state and trait anxiety have been defined by Spielberger (1972) as follows:

> State anxiety (S-anxiety) may be conceptualized as a transitory emotional state or condition of the human organism that varies in intensity and fluctuates over time. This condition is characterized by subjective, consciously perceived feelings of tension and apprehension, and activation of autonomic nervous system…Trait anxiety (T-anxiety) refers to relatively stable individual differences in anxiety proneness, that is, to differences in the disposition to perceive a wide range of stimulus situations as dangerous or threatening, and in the tendency to respond to such threats with S-anxiety reactions. (p.39)

In the context of this distinction, Spielberger has conceptualized test anxiety as a "situation specific form of T-anxiety" with worry and emotion as major components. In view of that, test anxiety has been defined as "an unpleasant feeling or emotional state that has physiological and behavioral concomitants, and that is experienced in formal testing or other evaluative situations" (Dusek, 1980, p.88).

The conception of test anxiety as a situation specific anxiety trait has inspired much research including the development of several objective instruments and empirical studies concerning relative influence on test performance and achievement (Spielberger & Vagg, 1995).

Moreover, there have been different theoretical explanations of test anxiety ranging from drive-oriented perspectives to cognitive formulations. Until the mid 1960s, test anxiety was initially explained as drive level. Drive theory, based on Hull's learning theory, explains learning of new responses and the probability of occurrence of that response. Drive is considered as a nondirectional energizer of behavior that resulted from motivational states within the person. Habit strength is based on the frequency of prior presentations of conditioned and unconditioned stimuli. Drive theory postulates that the strength of a given response is determined by a multiplicative function of drive state (D) and habit strength (H). Moreover, it is postulated that drive is mediated by a persistent emotional response in stressful or aversive situations (Weiner, 1992; Zeidner, 1998).

As applied to the anxiety domain, Spence (1958, cited in Zeidner, 1998) stated that persons high in anxiety are "responding more strongly to aversive occasions and tend to react even to mild ego-involving instructions with anxiety and fear of failure." Zeidner (1998) emphasized that test stimuli are conditioned stimuli and an individual's interpretation depends on prior experiences. Higher anxious individuals have learned to approach tests with great hesitation, trepidation, and fear of failure. In addition, according to this model, since anxiety increases overall drive level that causes competition among all possible responses, individuals will perform at a lower level, especially on difficult tasks. There have been several research studies supporting this postulation.

Current test anxiety theory is influenced by cognitive perspectives rather than behavioral ones. Social cognitive theory (Bandura, 1982) postulated that test anxiety develops within a social context. Part of the social mechanism that contributes to test anxiety is modeling or observational learning during early childhood. Bandura suggested that through observation of either live or symbolic models demonstrating specific behaviors in a particular context, individuals learn and acquire new responses that did not previously exist in their behavioral repertoire. Accordingly, complex emotional responses may be acquired by observing the expressed worry, tension, or concern of the relevant models in an evaluative situation. Furthermore, "the reciprocal determinism" can be also applied as a process through which test anxiety develops. Essentially reciprocal determinism assumes the person, situation, and behavior mutually interact to influence each other. This model adds a social flavor to how test anxiety develops and possibly adds to the ecological view of test anxiety.

In accordance with the reciprocal determinism, self-efficacy now occupies a central role in Bandura's social cognitive theory. Self-efficacy refers to a person's belief that he or she can successfully perform behaviors necessary to produce a desired outcome. According to social cognitive theory, there is a dynamic relation between self-efficacy and test anxiety. Test anxious individuals usually have low levels of self-efficacy and feel helpless to influence testing events. As a result, he or she, on a cognitive level believes that any efforts to succeed on any test are trivial. When obstacles occur during a test, individuals with high test anxiety are likely to quickly give up if initial attempts to overcome these obstacles are not successful. It is clearer that repeated failure on tests lower one's self-efficacy (Sapp, 1999).

There is a growing body of literature providing consistent findings about the relationship between self-efficacy and test anxiety. Dykeman (1992), using an experimental design

demonstrated that students with high self-efficacy showed a reduction in test anxiety, while low self-efficacy students showed an increase in test anxiety. Schwarzer and Jerusalem (1992) reported that based on the data collected in Germany in nine studies, correlation between test anxiety and self-efficacy ranged from -.30 to -.66. Smith, Arnkoff, and Wright (1990) indicated that self-efficacy for test success contributes to the prediction of test anxiety. Pintrich, Roeser, and DeGroot (1994) examined the association between self-efficacy and test anxiety at two points in time and reported that there is a negative correlation for both Time 1 (r=-.40) and Time 2 (r=-.41).

Ranging from drive theory to self-efficacy theory, all of the motivational theories have provided different insights that are helpful. However, there is still need for theoretical models that account for test anxiety. This study used drive theory and self-efficacy theory to explain test anxiety. This study addressed the following questions: How well do prior testing experiences and academic self-efficacy beliefs predict test anxiety in college students? How well do prior testing experiences and general self-efficacy beliefs predict test anxiety? The findings advance our understanding of test anxiety and assist us in enhancing the ability of examinees to cope adaptively with test anxiety.

Method

Sample

Participants for the study were 29 undergraduate college students enrolled in a mid-western university. Fifty-five percent were male, and 45% were female. Ages ranged from 18 to 21 with an average age of 19.3 years. In terms of prior academic performance, 27.6% had grade point averages under 2.70, while 31% were at 2.71 or higher, and 41.4% were freshmen students.

Students represented various academic majors including but not limited to engineering, nursing, business, and communication.

Measures

The predictor variables were self-efficacy and students' past testing experiences, whereas the criterion measure was test anxiety. The following instruments were used:

Test Anxiety Scale. Subjective Stress Scale (Kerle & Bialek, 1958) was adapted to measure test anxiety. It consisted of 10 items in which participants were asked to describe his or her strongest feeling in testing conditions provided by the researcher. An example of a condition was, "Today is the exam day. How do you feel as the exam is being passed out?" Each item included a 14-point scale anchored by weighted adjectives listed as "wonderful, fine, comfortable, steady, doesn't bother me, indifferent, timid, unsteady, nervous, worried, unsafe, frightened, panicky, and scared stiff. " Higher scores on this scale were equated with greater anxiety associated with test. Test reliability was found to be 0.89 for the overall sample (0.81 for female students; 0.85 for male students).

Previous Testing Experience Scale. This scale was developed by the researcher based on drive theory. It included 6 items (α=. 68) with a 4-point Likert scale. Examples were, "I have had many bad experiences with exams that make me feel anxious" and "I have a fear of disappointing my parents because of failing in exams."

College Academic Self-Efficacy Scale (CASES) (Owen & Froman, 1988). The instrument originally included 33 items. In this study, 9 of the items were used and 5 additional items were written by the researcher. Participants were asked to indicate the level of confidence they have relative to the completion of a series of academically related tasks such as "Answering question in a large class", "Challenging professor's opinion in class", and "Making presentation

in class." All items used a 5-point scale, with higher scores indicating greater academic self-efficacy. The alpha reliability was .92.

Generalized Self-Efficacy Scale (Schwarzer and Jerusalem, 1995). This scale was used to assess a general sense of perceived self-efficacy with the aim to predict coping with daily problems and adaptation after experiencing all kinds of stressful events. It was composed of 10 items. Examples were, "I can always manage to solve difficult problems if I try hard enough" and "I am confident that I could deal efficiently with unexpected events." Responses were made on a 4-point scale. The alpha reliability was .81.

Procedure

Students were informed that the instruments were part of a research project and given the option to not participate. Student volunteers completed a packet of 4 questionnaires and a demographic sheet in a single session administered by the researcher. The demographic items collected were sex, age, major academic field, and current grade point average.

Data Analysis

The data from this study were analyzed in several ways in order to explain test anxiety of college students by prior testing experiences and self-efficacy beliefs. First, descriptive statistics were used to develop a profile of the sample and to summarize the variables. Second, correlation coefficients using Pearson product-moment correlations were computed to determine the relationship among each predictor variable and the reported test anxiety of college students. Third, in order to identify the model better predicting test anxiety, two simultaneous multiple regression analyses with ordinary least squares were conducted; with one using academic self-efficacy and previous testing experiences to predict test anxiety and one using generalized self-efficacy instead of academic self-efficacy. A significance level of 0.05 was established.

Results

Gender differences in test anxiety have been well documented by many research studies. Females in comparison to males self-reported higher levels of test anxiety (Hembree, 1988; Rothblum, Solomon, & Murakami, 1986; Schonwetter, 1995). In this study, by using the Test Anxiety Scale developed by the researcher, it was found that female students (M = 59.34, SD = 11.83) are significantly more test anxious than male students (M = 39.31, SD = 39.31), t (27) = 3.81, $p < .01$. This finding provided one piece of empirical evidence for the validity of Test Anxiety Scale.

The mean scores and standard deviation of the variables are presented in Table 1. Also shown in Table 1 are the correlation coefficients between the dependent variable (Test Anxiety) and independent variables (Generalized Self-efficacy, Academic Self-efficacy, and Previous Testing Experiences).

Table 1

Means, Standard Deviations, and Intercorrelations for Test Anxiety and Predictor Variables (Generalized Self-Efficacy, Academic Self-Efficacy, and Previous Testing Experiences)

Variable	M	SD	PTE	GSE	ASE
Test Anxiety	48.29	17.14	.53**	-.16	-.49**
Predictor variable					
Previous Testing Experiences (PTE)	2.82	.48	--	-.14	-.32
Generalized Self-Efficacy (GSE)	2.96	.39		--	-.02
Academic Self-Efficacy (ASE)	3.06	.97			--

**$p<.01$

$N = 29$

On average, these college students had a test anxiety score of 48.29 (out of 94). On a 14-point rating scale, this refers to a point in the middle of the scale. Generally, scores showed a symmetric distribution. Both generalized self-efficacy (mean=2.96) and academic self-efficacy (mean=3.06) scores demonstrated a negative skewness, indicating higher sense of efficacy. Previous testing experience scores had an average of 2.82, which means that college students have less than positive testing experiences. Two significant correlations were obtained. There was a significant positive correlation (r =.53, p < .01) between test anxiety and previous testing experiences; that shows that students with less than positive past experiences tended to be high in test anxiety. There was a significant negative correlation (r = -.49, p < .01) between test anxiety and self-efficacy. This shows that students with lower self-efficacy tended to be higher in test anxiety.

Two separate multiple regression analyses were performed. Results are given in Table 2 and Table 3. In both of the analyses, there were no multicollinearity problems as indicated by VIF values.

Table 2

Regression Analysis Summary for Academic Self-Efficacy and Previous Testing Experiences Variables Predicting Test Anxiety

Variable	B	SEB	β	VIF
Previous Testing Experiences	14.90	20.69	.42*	1.11
Academic Self-Efficacy	-6.28	2.84	-.36*	1.11

Note. R^2 = .40 (N=29, p< .01)

*p < .05.

The first regression equation of test anxiety using previous testing experiences and academic self-efficacy as predictors was significant (F (2,28)=8.58, p< .01) and explained 40% of the variance in test anxiety scores. The independent variables were significant (p < .05).

Table 3

Regression Analysis Summary for Generalized Self-Efficacy and Previous Testing Experiences Variables Predicting Test Anxiety

Variable	B	SEB	β	VIF
Previous Testing Experiences	18.45	5.90	.52**	1.02
Generalized Self-Efficacy	-3.95	7.31	-.09	1.02

Note. R^2 = .29 (N=29, p<. 05)

**p < .01.

In the second regression equation, test anxiety was regressed on prior testing experiences and generalized self-efficacy. The equation containing these variables accounted for 29.2% of the variance in test anxiety was significant (F (2,28) = 5.37, p< .05). Previous testing experience was also significant in this model (p<. 01); however general self-efficacy is not a significant predictor of test anxiety in college students.

Discussion

Analysis of data showed that the perceptions of previous testing experiences and academic self-efficacy beliefs of college students were significant predictors in explaining the variability in test anxiety. Moreover, students with higher test anxiety had poor testing experiences and were lower in academic self-efficacy. R^2 = 0.40 is a moderate effect size; this is most probably due to small sample size. On the other hand, the regression model with

generalized self-efficacy instead of academic self-efficacy was significant but explain less variance in test anxiety than the first regression model. In addition, generalized self-efficacy was not significantly contributing to test anxiety. This finding is expected as emphasized by Bandura that as self-efficacy scales are more specific, their efficiency is increased to predict a behavior.

Predictor variables of previous testing experiences and self-efficacy beliefs were used in this study to explain test anxiety by using Drive theory and Self-efficacy theory respectively.

Drive theory proposes that poor test performances often result in aversive or fear-provoking consequences. The person then generalizes that to all tests and testing situations and expects that situation in his or her future experiences. The questions that could be asked to explain test anxiety by using this theory are: "What makes you test anxious? What positive or negative consequences of test anxiety have you experienced? What fears do you have?" Items on the Previous Testing Experience Scale were constructed based on these questions. The significant positive correlation between lower past performance and test anxiety confirms the postulation of this theory. Most probably, many years of failing in tests would increase anxiety (or drive). Since there is no way to change the past performances, counseling about the influence of those experiences might be helpful for students to deal with test anxiety.

Self-efficacy refers to the expectation (or belief) of being able to perform a particular behavior successfully. The chief question is: "How much confidence do you have about doing this particular behavior?" According to this theory, test anxious students have lower levels of self-efficacy. They would feel more helpless and believe that they can't do well in tests. This postulation was verified in this study with the significant negative correlation between academic self-efficacy and test anxiety.

Self-efficacy theory could be used to help test anxious students cope with stress in evaluative situations. Bandura (1986) suggested that self-efficacy for test-anxious persons could be enhanced by:

(1) increasing one's sense of achievement by being exposed to successful testing experiences by establishing testing situations through which one can reach realistic goals

(2) exposing an individual to appropriate models, who can then successfully perform during testing situations. Because observing others who are similar to oneself perform successfully on tests was found to be strengthening self-efficacy.

(3) providing verbal persuasion and encouragement concerning test taking if it occurs in a realistic context (by parent, teacher, or peers)

(4) gradual exposure to testing situations (called desensitization) or repeatedly (called performance exposure)

(5) counseling person or using some relaxation strategies.

Suggestions for Future Research

The following implications are deduced for future studies on test anxiety:

1) To increase external validity (or generalizability) of results to college students, a similar study could be conducted with a larger sample size.
2) Interviews could be used to explore the nature, causes, and correlates of test anxiety in depth.
3) Although a variety of models and theoretical perspectives have been proposed, no single unifying model was able to explain multiple aspects such as cause and effect

relationships between test anxiety and related cognitive and affective facets. This might be achieved in future studies.

References

Bandura, A. (1982). Self-efficacy mechanism in human agency. *American Psychologist,* 37, 122-147.

Dusek, J. B. (1980). The development of test anxiety in children. In Irwin B. Sarason (Ed.), *Test Anxiety: theory, research, and applications* (pp.87-110). Hillsdale, NJ: Lawrance Erlbaum Associates, Inc.

Dykeman, B. F. (1992). The effects of motivational orientation, self-efficacy, and feedback condition on test anxiety. *Journal of Instructional Psychology,* 21(2), 114-119.

Hembree, R. (1988). Correlates, causes, effects, and treatment of test anxiety. *Review of Educational Research,* 58, 7-77.

Kerle, R. H. & Bialek, H. M. (1958). *The construction, validation, and application of a subjective stress scale* (staff memorandum). Monterey, CA: US Army Leadership Human Research Unit.

Liebert, R. M., & Morris, L. W. (1967). Cognitive and emotional components of test anxiety: A distinction and some initial data. *Psychological Reports,* 20, 975-978.

Owen, S. V., & Froman, R. D. (1988, April). *Development of a College Academic Self-Efficacy Scale (CASES).* Paper presented at the Annual Meeting of National Council on Measurement in Education, New Orleans, LA.

Pintrich, P. R., Roeser, R. W., & DeGroot, E. A. (1994). Classroom and individual differences in early adolescents' motivation and self-regulated learning. *Journal of Early Adolescence,* 14, 139-161.

Rothblum, E. D., Solomon, L. J., & Murakami, J. (1986). Affective, cognitive, and behavioral differences between high and low procrastinators. *Journal of Counseling Psychology, 33*, 387-394.

Sapp, M. (1999). *Test anxiety: applied research, assessment, and treatment interventions*. Maryland: University Press of America.

Sarason, I. G. (1959). Intellectual and personality correlates of test anxiety. *Journal of Abnormal and Social Psychology,* 59, 272-275.

Schonwetter, D. J. (1995, April). *Academic success in college: an empirical investigation of gender differences by test anxiety interaction*. Paper presented at the annual meeting of the American Educational Research Association, San Francisco.

Schwarzer, R., & Jerusalem, M. (1992). Advances in anxiety theory: A cognitive process approach. In K. A. Hagtvet & B.T. Johnsen (Eds.), *Advances in test anxiety research* (Vol. 7, pp.2-17). Lisse, The Netherlands: Swets & Zeitlinger.

Smith, R. J., Arnkoff, D. B., & Wright, T. L. (1990). Test anxiety and academic competence: A comparison of alternative models. *Journal of Counseling Psychology*, 37, 313-321.

Spielberger, C. D. (1972). *Anxiety: Current trends in theory and research*. New York: Academic Press.

Spielberger, C. D. & Vagg, P.R. (1995). Test anxiety: A transactional process. In C.D. Spielberger & P.R. Vagg (Eds.), *Test anxiety: Theory, assessment, and treatment* (pp.3-14). Washington, DC: Taylor & Francis.

Weiner, B. (1992). *Human Motivation*: Thousand Oaks, CA: Sage Publications.

Zeidner, M. (1998). *Test anxiety: The state of the art*. New York: Plenum Press.

TM034563

U.S. Department of Education
Office of Educational Research and Improvement (OERI)
National Library of Education (NLE)
Educational Resources Information Center (ERIC)

REPRODUCTION RELEASE

(Specific Document)

I. DOCUMENT IDENTIFICATION:

Title: SELF-EFFICACY AND PREVIOUS TESTING EXPERIENCES AS PREDICTORS OF TEST ANXIETY AMONG COLLEGE STUDENTS	
Author(s): Yesim CAPA & William E. LOADMAN	
Corporate Source:	Publication Date: October 2002

II. REPRODUCTION RELEASE:

In order to disseminate as widely as possible timely and significant materials of interest to the educational community, documents announced in the monthly abstract journal of the ERIC system, *Resources in Education* (RIE), are usually made available to users in microfiche, reproduced paper copy, and electronic media, and sold through the ERIC Document Reproduction Service (EDRS). Credit is given to the source of each document, and, if reproduction release is granted, one of the following notices is affixed to the document.

If permission is granted to reproduce and disseminate the identified document, please CHECK ONE of the following three options and sign at the bottom of the page.

The sample sticker shown below will be affixed to all Level 1 documents

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL HAS BEEN GRANTED BY

Sample

O THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

1

Level 1

☐

Check here for Level 1 release, permitting reproduction and dissemination in microfiche or other ERIC archival media (e.g., electronic) *and* paper copy.

The sample sticker shown below will be affixed to all Level 2A documents

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL IN MICROFICHE, AND IN ELECTRONIC MEDIA FOR ERIC COLLECTION SUBSCRIBERS ONLY, HAS BEEN GRANTED BY

Sample

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

2A

Level 2A

☒

Check here for Level 2A release, permitting reproduction and dissemination in microfiche and in electronic media for ERIC archival collection subscribers only

The sample sticker shown below will be affixed to all Level 2B documents

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL IN MICROFICHE ONLY HAS BEEN GRANTED BY

Sample

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

2B

Level 2B

☐

Check here for Level 2B release, permitting reproduction and dissemination in microfiche only

Documents will be processed as indicated provided reproduction quality permits.
If permission to reproduce is granted, but no box is checked, documents will be processed at Level 1.

I hereby grant to the Educational Resources Information Center (ERIC) nonexclusive permission to reproduce and disseminate this document as indicated above. Reproduction from the ERIC microfiche or electronic media by persons other than ERIC employees and its system contractors requires permission from the copyright holder. Exception is made for non-profit reproduction by libraries and other service agencies to satisfy information needs of educators in response to discrete inquiries.

Sign here, → please

Signature: Yesim Capa	Printed Name/Position/Title: YESIM CAPA	
Organization/Address: The Ohio State University 301 Ramseya Hall. 29 W. Woodruff Ave. Columbus, OH - 43210	Telephone: (614) 688-9532	FAX:
	E-Mail Address: capa.1@osu.edu	Date: 10/24/2002

(Over)

III. DOCUMENT AVAILABILITY INFORMATION (FROM NON-ERIC SOURCE):

If permission to reproduce is not granted to ERIC, *or*, if you wish ERIC to cite the availability of the document from another source, please provide the following information regarding the availability of the document. (ERIC will not announce a document unless it is publicly available, and a dependable source can be specified. Contributors should also be aware that ERIC selection criteria are significantly more stringent for documents that cannot be made available through EDRS.)

Publisher/Distributor:
Address:
Price:

IV. REFERRAL OF ERIC TO COPYRIGHT/REPRODUCTION RIGHTS HOLDER:

If the right to grant this reproduction release is held by someone other than the addressee, please provide the appropriate name and address:

Name:
Address:

V. WHERE TO SEND THIS FORM:

Send this form to the following ERIC Clearinghouse:

ERIC CLEARINGHOUSE ON ASSESSMENT AND EVALUATION
UNIVERSITY OF MARYLAND
1129 SHRIVER LAB
COLLEGE PARK, MD 20742-5701
ATTN: ACQUISITIONS

However, if solicited by the ERIC Facility, or if making an unsolicited contribution to ERIC, return this form (and the document being contributed) to:

ERIC Processing and Reference Facility
4483-A Forbes Boulevard
Lanham, Maryland 20706

Telephone: 301-552-4200
Toll Free: 800-799-3742
FAX: 301-552-4700
e-mail: info@ericfac.piccard.csc.com
WWW: http://ericfacility.org